

REMARKSA. Background

Claims 1-61 were pending in the application at the time of the Office Action. The Office Action rejected claims 1-54 and 56 as being indefinite. Claims 1-4, 8-10, 14-17, 21-25, 27, 28, 31, 33-36, 40-43, 47-53, 55-59, and 61 were rejected as being anticipated by cited art. Claims 11, 29, and 57 were rejected as being obvious over cited art. Claim 60 was objected to as being dependent upon a rejected base claim. By this response applicant has amended claims 1-5, 8-10, 12, 14, 16, 21-28, 31-33, and 58; cancelled claims 34-57, 60, and 61; and added new claims 62-87. As such, claims 1-33, 58, 59 and 62-87 are presented for the Examiner's consideration in light of the following remarks.

B. Changed Attorney Docket No.

Applicant notes at the outset that the docket number for this case has been changed to 16602.1. Applicant respectfully requests that all applicable USPTO records be updated accordingly, and Applicant further requests that all further communications from the USPTO reference docket number 16602.1.

C. Proposed Claim Amendments

Applicant has herein amended claims 1-5, 8-10, 12, 14, 16, 21-28, 31-33, and 58 to further clarify the invention and correct formal matters cited by the Office Action. For example, independent claim 1 has been amended to recite the "means for cutting the foil being movable along a path spaced from the forming edge to pierce a side of the foil to create a cut edge at a location of the foil in which the other side of the foil is unsupported as the foil is held by the

means for infeeding and the means for outfeeding.” This amendment is supported by at least Figures 1 and 8 and page 7, lines 20-27 of the specification.

Applicant has herein added new claims 62-87 in which the means-plus-function language of claims 1-33 has been replaced with structural language. Applicant submits that claims 62-87 are supported by the specification, drawings and claims as originally filed and do not add new matter.

In view of the foregoing discussion, applicant submits that the amendments to the claims do not introduce new matter and entry thereof is respectfully requested.

**D. Rejection on the Merits**

**35 U.S.C. § 112 Rejections**

Page 2 of the Office Action rejects claims 1-54 and 56 under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter. Specifically, the Office Action asserts a lack of antecedence for various terms in claims 1, 5, 34, 37, and 56. Applicant has herein cancelled claims 34, 37, and 56, thus making the indefiniteness rejection moot with regards to these claims. Applicant has herein amended claim 1 to remedy the Examiner's concerns with regard to claims 1 and 5. Accordingly, Applicant respectfully requests that the indefiniteness rejections of claims 1-54 and 56 be withdrawn.

**35 U.S.C. § 102 Rejections**

Applicant respectfully notes that a claim is anticipated under 35 U.S.C. § 102(a), (b), or (e) only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. Further, the identical invention must be shown in as

complete detail as is contained in the claim. Finally, the elements must be arranged as required by the claim. MPEP § 2131.

Page 3 of the Office Action rejects claims 1-4, 8-10, 14-16, 22-25, 34-36, 40-42, 47-50, 55, and 56 under 35 USC § 102(b) as being anticipated by U.S. Patent No. 3,832,876 to Arens. Page 4 of the Office Action rejects claims 1, 2, 8-10, 14-17, 21, 22, 25, 27, 28, 31, 33, 34, 40-43, 47, 48, 51-53, 55-59, and 61 under 35 USC § 102(a) or (e) as being anticipated by U.S. Patent No. 6,602,177 to Muir. Pages 4-5 of the Office Action also reject claims 58 and 59 under 35 USC § 102(b) as being anticipated by U.S. Patent No. 6,237,608 to Kari. Applicant has herein cancelled claims 34-36, 40-43, 47-53, 55-57, and 61, thus making the anticipation rejections moot with regards to these claims. Regarding the rest of the cited claims, applicant respectfully traverses the rejections in view of amendments made herein.

Arens and Muir disclose machines used for cutting sheets of material and folding the cut ends. In both Arens and Muir, the cutting mechanisms are shear cutting mechanisms requiring the strip or foil to be supported on the opposite side of the strip or foil as the blade passes the shearing edge. For example, Arens, includes a fixed cut-off bar 174 with a cut-off edge 176 and a rotatable cut-off bar 180 that has a longitudinal face 208. See Arens, col. 4, lines 10-11 and 42-45 and Figures 3-5. To cut the sheet, the shaft face 208 has a sharp peripheral cutting edge 218 which cooperates with the sharp cutting edge 176 to sever the strip S. Arens, col. 4, lines 51-53. Thus, it is the shearing action between the two cutting edges 176 and 218 that causes the cutting to occur.

To cut the sheet 30 in Muir, a blade 72 is raised and sheet 30 is cut when blade 72 passes through sheet 30 as the other side of sheet 30 is supported against edge 68 on the rear side of

blade housing 70. See Muir, col. 5, lines 38-41 and Figures 3-4. Thus, similar to Arens, it is the shearing action between blade 72 and edge 68 which causes the cutting to occur in Muir.

Because both Arens and Muir require a shearing action to cut the sheet material, neither Arens nor Muir disclose or suggest "means for cutting the foil ... to pierce a side of the foil to create a cut edge at a location of the foil in which the other side of the foil is unsupported as the foil is held by the means for infeeding and the means for outfeeding," as recited in amended claim 1. Claims 2-4, 8-10, 14-17, 21-25, 27, 28, 31, and 33 depend from claim 1 and thus incorporate the limitations thereof. As such, applicant submits that claims 2-4, 8-10, 14-17, 21-25, 27, 28, 31, and 33 are distinguished over the cited art for at least the same reasons as discussed above with regard to claim 1. Accordingly, Applicant respectfully requests that the anticipation rejection of claims 1-4, 8-10, 14-17, 21-25, 27, 28, 31, and 33 be withdrawn.

Regarding claims 58 and 59, Applicant has amended claim 58 herein to include the limitations of claim 60, which the Examiner conceded in the Office Action is distinctly patentable from the cited art (see below). Thus, Applicant respectfully asserts that claim 58 is now in condition for allowance. Claim 59 depends from claim 58 and thus incorporates the limitations thereof. As such, applicant submits that claim 59 is distinguished over the cited art for at least the same reasons as discussed above with regard to claim 58 and requests that the anticipation rejections of claims 58 and 59 be withdrawn.

Applicant asserts that the present invention has a number of advantages over the cited prior art. For example, a cutting mechanism similar to that of Arens was considered by the current inventor during the early development of his machine, but was quickly rejected on the basis that the shear cutting faces wear out too quickly even with hardened shearing edges cutting foil. If the Arens machine was converted to cut aluminum foil, the cutting mechanism would

require an extremely small clearance between the cutting edges and the tight tolerances required in manufacture of the machine would make it more expensive.

In examples of the present invention, the foil is held by the infeed and outfeed rollers but is unsupported in the cutting region, which is spaced from the folding edge. In use, the cutting means pierces the foil in the unsupported region resulting in cutting of the foil in a manner which avoids the foil rubbing on the blade edge, which in turn reduces blunting of the blade and increases the life of the blade. The inventor has found that in some embodiments his machine will perform over 600,000 cuts without significant dulling of the blade. This sort of performance would be difficult if not impossible with the arrangements described in Arens or Muir since the shearing action rapidly causes blade dulling.

### 35 U.S.C. § 103 Rejections

Page 3 of the Office Action rejects claim 57 under 35 USC § 103(a) as being unpatentable over the Arens patent in view of what the examiner considers to be obvious to those skilled in the art. Applicant has herein cancelled claim 57 thus making the obviousness rejection moot with regards to this claim.

Page 4 of the Office Action rejects claim 11 under 35 USC § 103(a) as being unpatentable over the Arens patent in view of U.S. Patent No. 3,156,283 to Ruschmann. Page 4 of the Office Action also rejects claims 11 and 29 under 35 USC § 103(a) as being unpatentable over the Muir patent in view of U.S. Patent No. 3,156,283 to Ruschmann. Specifically, the Office Action asserts that it would have been obvious to "coat ... the rolls [of Arens or Muir] with a friction material as taught by Ruschmann." Applicant submits that even if, *arguendo*, it was obvious to modify Arens or Muir in this manner, the combinations would still not produce

the inventions as recited in claims 11 or 29. As described above, neither Arens nor Muir anticipates amended claim 1 because neither discloses "cutting means ... to pierce a side of the foil to create a cut edge at a location of the foil in which the other side of the foil is unsupported as the foil is held by the means for infeeding and the means for outfeeding." Claims 11 and 29 depend from claim 1 and thus incorporate this limitation of claim 1. Coating the rolls of Arens or Muir with a friction material, as proposed by the Office Action, would still not cure this deficiency of Arens or Muir. Thus, applicant submits that claims 11 and 29 are distinguished over the proposed modifications of Arens by Ruschmann or Muir by Ruschmann for at least the same reason that claim 1 is distinguished over Arens and Muir. Accordingly, Applicant respectfully requests that the obviousness rejections of claims 11 and 29 be withdrawn.

#### **Allowable Subject Matter**

Page 5 of the Office Action states that claims 5-7, 12, 13, 18-20, 26, 30, 32, 37-39, 44-46, and 54 would be allowable if rewritten to overcome the rejections under 35 USC § 112, 2nd paragraph, and amended to include all of the limitations of the claims from which they depend. As discussed above, Applicant asserts that claim 1 is distinguished over the cited art. Claims 5-7, 12, 13, 18-20, 26, 30, and 32 depend from claim 1 and thus incorporate the limitations thereof, making these claims also distinguished over the cited art for the same reasons. Since claims 5-7, 12, 13, 18-20, 26, 30, and 32 are distinguishable over the cited art for at least the reasons as set forth above, applicant submits that claims 5-7, 12, 13, 18-20, 26, 30, and 32 are now in condition for allowance.

Claim 60 was objected to as being dependent upon a rejected base claim, but the Office Action stated that it would be allowable if rewritten in independent form including all of the

limitations of the base claim and any intervening claims. In response, Applicant has herein cancelled claim 60 and amended claim 58, which claim 60 previously depended from, to include all of the limitations of claim 60. Accordingly, Applicant submits that claim 58 is now in condition for allowance.

#### **New Claims**

Applicant submits that new claim 62 is allowable for substantially the same reasons as discussed above with regard to claim 1. Specifically, applicant submits that the prior art does not disclose or suggest a "cutter being movable along a path spaced from the forming edge to pierce a side of the foil to create a cut edge at a location of the foil in which the other side of the foil is unsupported as the foil is held by the pair of infeed rollers and the pair of outfeed rollers and to fold the cut edge around the forming edge," as recited in claim 62. Claims 63-87 depend from claim 62 and thus are allowable for at least the same reasons as discussed with regard to claim 62.

No other objections or rejections are set forth in the Office Action.

#### **E. Conclusion**

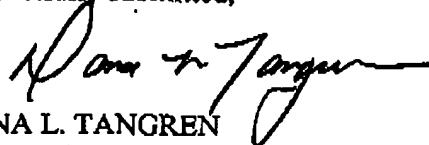
Applicant notes that this response does not discuss every reason why the claims of the present application are distinguished over the cited art. Most notably, applicant submits that many if not all of the dependent claims are independently distinguishable over the cited art. Applicant has merely submitted those arguments which it considers sufficient to clearly distinguish the claims over the cited art.

In view of the foregoing, applicant respectfully requests the Examiner's reconsideration and allowance of claims 1-33, 58, 59, and 62-87 as amended and presented herein.

In the event there remains any impediment to allowance of the claims which could be clarified in a telephonic interview, the Examiner is respectfully requested to initiate such an interview with the undersigned.

Dated this 16 day of February 2006.

Respectfully submitted,



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